

TTLL6 siRNA (m): sc-154794

BACKGROUND

A large protein group known as the tubulin tyrosine ligase-like family (TTL) is implied to catalyze ligations of amino acids to tubulins and other substrates. Each member contains a characteristic TTL domain. TTLL6 (tubulin tyrosine ligase-like family, member 6), also known as TTL6 or tubulin polyglutamylase TTLL6, is an 843 amino acid protein that preferentially modifies α Tubulin and plays a role in apoptosis. As a polyglutamylase, TTLL6 participates in side-chain elongation during polyglutamylation and localizes to both cytoplasm and cilium. TTLL6 is highly expressed in testis, with low expression in brain and stomach, and exists as two alternatively spliced isoforms. The gene encoding TTLL6 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1.

REFERENCES

1. Idriss, H.T. 2000. Phosphorylation of tubulin tyrosine ligase: a potential mechanism for regulation of alpha-tubulin tyrosination. *Cell Motil. Cytoskeleton* 46: 1-5.
2. Erck, C., et al. 2000. Tubulin-tyrosine ligase, a long-lasting enigma. *Neurochem. Res.* 25: 5-10.
3. Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 97: 241-244.
4. Minamoto, T., et al. 2001. Distinct pattern of p53 phosphorylation in human tumors. *Oncogene* 20: 3341-3347.
5. Janke, C., et al. 2005. Tubulin polyglutamylase enzymes are members of the TTL domain protein family. *Science* 308: 1758-1762.

CHROMOSOMAL LOCATION

Genetic locus: Ttl6 (mouse) mapping to 11 D.

PRODUCT

TTLL6 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TTLL6 shRNA Plasmid (m): sc-154794-SH and TTLL6 shRNA (m) Lentiviral Particles: sc-154794-V as alternate gene silencing products.

For independent verification of TTLL6 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-154794A, sc-154794B and sc-154794C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

TTLL6 siRNA (m) is recommended for the inhibition of TTLL6 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TTLL6 gene expression knockdown using RT-PCR Primer: TTLL6 (m)-PR: sc-154794-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.